

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/EP2004/012245	International filing date (day/month/year) 28.10.2004	Priority date (day/month/year) 13.11.2003	
International Patent Classification (IPC) or national classification and IPC INV. A47L25/08			
Applicant UNILEVER PLC			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 2 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box. Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 30.05.2005		Date of completion of this report 28.03.2006	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized officer Cabral Matos, A Telephone No. +31 70 340-2668 	

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/012245

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-15 as originally filed

Claims, Numbers

1-7 received on 15.09.2005 with letter of 13.09.2005

Drawings, Sheets

1/3-3/3 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-7
	No: Claims	
Inventive step (IS)	Yes: Claims	1-7
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-7
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V.

- 1 The following document is referred to in this communication:

D1: DE1073997B (MATTHESIUS, B.) 28 January 1960 (1960-01-28)

2 INDEPENDENT CLAIM 1

- 2.1 The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and discloses in the wording of claim 1 (the references in parentheses applying to this document; cf. figure 1):

a dispensing device comprising:

a reservoir (1); one or more dispensing orifices (6') in fluid communication with the reservoir (1); a movable platform (2) movable by means of a screw mechanism, whereby rotation of a screw (3) advances the movable platform (2) against the stored fabric cleaning fluid thereby dispensing a metered dose of the cleaning fluid from the reservoir (1) to be dispensed via the dispensing orifices (6').

The subject-matter of claim 1 differs from this known dispensing device in that it contains a shear-thinning fabric cleaning liquid having viscosity profile such that from rest and up to an applied shear stress of 10 Pa the viscosity of the fluid is at least 100 Pa.s and under a shear field of 20 s^{-1} of at most 5 Pa.s.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

- 2.2 The problem to be solved by the present invention may be regarded as to select a cleaning liquid for combination with the dispensing device disclosed in D1 so that the combination provides good dispensing properties while avoiding leakage during storage.

The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT), because in the available prior art it is neither known nor suggested to combine a screw-feed

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(SEPARATE SHEET)**

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dispensing device as disclosed in D1 with a shear thinning liquid having the claimed properties.

- 2.3 Claims 2-7 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

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* field of 20 s^{-1} of at most 5 Pa.s

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CLAIMS

1. A dispensing device comprising:

(d) a reservoir ^{containing} ~~for storing~~ a fabric cleaning fluid having5 ~~viscosity of over 10 Pa.s at rest or under an applied~~~~pressure of up to 10 Pa~~ ^{shear-thinning liquid} profile such that from rest and up to an applied shear stress of 10 Pa the viscosity of the fluid is at least 100 Pa.s and under a shear *

(e) one or more dispensing orifices in fluid communication

with the reservoir

10 a movable platform movable by means of a screw mechanism, whereby rotation of a screw advances the movable platform against the stored, fabric cleaning fluid thereby dispensing a metered dose of the cleaning fluid from the reservoir to be dispensed via the dispensing orifices.

15 2. A device according to claim 1 wherein the platform comprises a wall or base portion of the reservoir and sliding the platform within the reservoir, progressively reduces the volume of the reservoir thereby forcing the fluid to exit the reservoir.

20 3. A device according to any preceding claim in which the reservoir and movable platform are non-circular in cross section, such that, in use, rotation of the reservoir relative to the platform is resisted.

25 4. A device according to any preceding claim in which the cross section of the reservoir and platform include at least one non-curved section.

30 5. A device according to any preceding claim in which

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the reservoir is uniform in cross section at least along the length in which the platform moves.

6. A device according to any preceding claim in which
5 the platform is configured for reciprocal generally axial movement internally of the reservoir.

7. A device according to any preceding claim in which
the platform is movable by means of screw mechanism.